

# Healthier battered foods thanks to a gift from the sea called 'chitosan'

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Researchers at UPV

All hail chitosan and the researchers at the Polytechnic University of Valencia who discovered it, because it's going to make your chicken nuggets and your calamari that little bit healthier.

Chitosan is obtained from sources such as prawn shells and is used in the batter mix to inhibit the production of a substance called acrylamide, which has been linked to a greater risk of certain types of cancer. Unlike other acrylamide-inhibiting alternatives already available, this solution from the Universitat Politècnica de València (Polytechnic University of Valencia, UPV) lowers acrylamide production by 60 percent and does so without affecting flavour.

When your battered chicken nuggets or calamari are frying away, a substance called acrylamide is produced. It is produced at temperatures as low as 120°C (gas mark 1), meaning it is present in a wide range of fried and oven-cooked foods, including chips and battered foods, which are especially popular among young children and teenagers.

A recent publication from the European Food Security Authority warns of the relationship between the consumption of foods with high levels of acrylamide and a greater risk of certain types of cancer, "underlining the need to intervene in food processes in order to reduce levels to an absolute minimum," says Ana Andrés, one of the researchers in this study.



### Chitosan in action

At the UPV's Institute of Food Engineering (IIAD) Andrés and colleagues have developed various pre-frying strategies to inhibit the generation of acrylamide in fried foods. Among them is the use of chitosan which, as a natural product used in very small quantities (lower than 0.3 percent), leads to a reduction in [acrylamide](#) formation of up to 60 percent.

Better yet it does so without any alteration to the food's sensorial properties.

"There are other alternatives that give a similar reduction, but they either

impact negatively on the sensorial qualities of the food or need to be used in much higher quantities. The use of chitosan, then, will allow the [food](#) industry to offer consumers healthier fried foods at minimal additional cost."

Provided by Asociacion RUVID

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